

**EMERGENCY RESPONSE  
QUALITY ASSURANCE SAMPLING PLAN**

**FOR**

**TULANE UNIVERSITY - NATIONAL PRIMATE RESEARCH CENTER  
18703 THREE RIVERS ROAD  
COVINGTON, ST TAMMANY PARISH, LOUISIANA**

Prepared for

**U.S. Environmental Protection Agency Region 6**  
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## TABLE OF CONTENTS

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Section	Page
<b>1 INTRODUCTION.....</b>	<b>1-1</b>
1.1 PROJECT OBJECTIVES .....	1-1
1.2 PROJECT TEAM .....	1-1
<b>2 SITE BACKGROUND .....</b>	<b>2-1</b>
2.1 SITE LOCATION AND DESCRIPTION .....	2-1
2.2 OPERATIONAL HISTORY AND OWNERSHIP .....	2-1
<b>3 EMERGENCY RESPONSE ACTIVITIES .....</b>	<b>3-1</b>
3.1 SAMPLING STRATEGY .....	3-1
3.2 DATA QUALITY OBJECTIVE .....	3-1
3.3 PRELIMINARY FIELD ACTIVITIES .....	3-2
3.3.1 Field Activities Review Meeting .....	3-2
3.3.2 Mobilization and Command Post Establishment .....	3-2
3.3.3 Health and Safety Plan Implementation .....	3-2
3.3.3 Documentation of Field Sampling Activities .....	3-3
3.3.4 Decontamination and Investigation-Derived Wastes (IDW) .....	3-3
3.4 SAMPLING/MONITORING APPROACH.....	3-4
3.4.1 Soil Sampling.....	3-4
3.4.2 Water Sampling .....	3-5
3.4.3 Air Sampling.....	3-6
3.4.4 Investigation-Derived Wastes .....	3-7
3.4.5 Quality Assurance/Quality Control Samples .....	3-7
3.5 DEVIATIONS FROM THE SAMPLING PLAN .....	3-8
<b>4 ANALYTICAL APPROACH.....</b>	<b>4-1</b>
<b>5 QUALITY ASSURANCE .....</b>	<b>5-1</b>
5.1 SAMPLE CUSTODY PROCEDURES .....	5-1
5.2 PROJECT DOCUMENTATION.....	5-2
5.2.1 Custody Seal .....	5-2
5.2.2 Photographic Documentation.....	5-2
5.2.3 Report Preparation .....	5-3

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## LIST OF APPENDICIES

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Appendix A	Standard Operating Procedures (SOPs)
Appendix B	TDD No: TBD

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## LIST OF FIGURES

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Figure 1-1	Site Location Map
Figure 2-1	Site Area Map
Figure 3-1	Proposed Sample Location Map

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## LIST OF TABLES

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Table	Title	Page
Table 3-1	Sample Locations and Sampling Rationale.....	3-9
Table 4-1	Requirements for Containers, Preservation Techniques, Sample Volumes, and Holding Times.....	4-2

## **1. INTRODUCTION**

Weston Solutions, Inc. (WESTON®), the Superfund Technical Assessment and Response Team (START-3) contractor, has been tasked by U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response Branch (PRB) under Contract Number EP-W-06-042 and Technical Direction Document (TDD) No. 1/WESTON-042-15-008 to conduct an Emergency Response (ER) at the National Primate Research Center, located in Covington, St Tammany Parish, Louisiana.

The EPA Team has prepared this ER Quality Assurance Sampling Plan (QASP) to describe the field investigation activities, sampling, and analytical scope of work to be conducted as part of the response.

### **1.1 PROJECT OBJECTIVES**

The EPA Team is providing technical assistance to EPA Region 6 for the performance of the biological assessment as part of the ER. EPA will be responsible for coordinating the collection and analysis of environmental samples. However, personnel from the Tulane National Primate Research Center (TNPRC) will collect the on-site soil, sediment, and water samples with EPA oversight. The EPA Team will collect the air samples.

### **1.2 PROJECT TEAM**

The EPA Team will consist of EPA Task Monitor (TM), John Martin; Sam Cheek, the EPA Team Project Team Leader (PTL); Jose Ojeda, the Field Team Leader (FTL); Jeff Wright, Project Chemist; Janine Latham, IT and Data Manager (DM); and additional EPA Team members as necessary to assist with sample preparation, packing, and shipment.

The EPA Team PTL will be responsible for the technical quality of work performed in the field and will serve as the EPA team liaison to the EPA TM during the field activities. The PTL will log the activities at each sample location in the field logbook and verify the sample

documentation. The DM will be responsible for entering all samples collected into the Scribe Environmental Sampling Data Management System (SCRIBE), for producing accurate chain-of-custody documentation for the samples during the ER, and for entering daily operations and sample collection data into EPA Response Manager. The PTL will oversee the packaging and shipping of samples to the designated laboratory. The PTL will also be responsible for providing overall site health and safety support during field activities.

## **2. SITE BACKGROUND**

Two macaques at TNPRC were potentially infected with the bacteria *Burkholderia pseudomallei* (abbreviated Bp, the cause of Melioidosis). One animal was euthanized on 26 November 2014, and the second macaque has reportedly recovered. According to the Center for Disease Control (CDC) *Burkholderia pseudomallei* is a bacterium endemic to Southeast Asia and Northern Australia, and is typically found in contaminated water and soil. The bacterium spreads through direct contact with the contaminated source. The manner in which the macaques were exposed to the Bp is not known at this time.

An Inspector for the U.S. Department of Agriculture was reported to have become sick after performing an inspection at the facility. However, it has not been determined if the Inspector's illness is related to or is the result of exposure to Bp.

### **2.1 SITE LOCATION AND DESCRIPTION**

The TNPRC is divided into a "North Campus" and a "South Campus." The North Campus is located north of Three Rivers Road and contains the offices and laboratories. The South Campus is located south of Three Rivers Road and contains the macaque breeding colonies, the storm-water treatment system, and the sewage treatment system. The macaques were located in cages in the South Campus when they were discovered to be sick.

### **2.2 OPERATIONAL HISTORY AND OWNERSHIP**

The TNPRC has a national mission to improve human and animal health through basic and applied biomedical research. The TNPRC website states their purpose is the following:

- Conduct basic and applied biomedical research on human health problems using nonhuman primate models.
- Investigate nonhuman primate biology and diseases with particular regard to the study of human health problems.
- Serve as a regional and national resource and center of excellence for biomedical research using nonhuman primates.

- Provide training for graduate students, postdoctoral fellows, veterinarians, undergraduates, veterinary students, and visiting scientists.
- Educate the general public about the critical link between basic research with animal models and improvements in human health.

### **3. RESPONSE ACTIVITIES**

The activities that will be conducted during the response are discussed in this section. Sampling of surface water, sediment and waste sampling procedures, locations, analytical approach, and quality assurance (QA) that will be conducted during the response are also discussed.

#### **3.1 SAMPLING STRATEGY**

A sampling strategy was developed by TNPRC and EPA representatives to collect the data necessary to evaluate and meet the objectives of the response. The sampling strategy focuses on the collection of soil, water, and air samples by employees of the TNPRC. Sampling Standard Operating Procedures (SOPs) for naturally occurring Bp in the soils of Southeast Asia call for a sample depth of 30 centimeters. However, for this response the source of the Bp is believed to be runoff of waste products from the macaque cages which could have been deposited onto the top of the soil or sediment. Therefore, soil and sediment samples will be collected in the top 2 inches of soil. Samples may be collected at a greater depth as the project progresses.

Table 3-1 has been prepared to include a summary of Sample Locations and Sampling Rationale as part of the ER field effort.

#### **3.2 DATA QUALITY OBJECTIVE**

The objective of sampling activities is to determine if Bp is present in the soil, sediment, water, and air at the facility. Soil, sediment, and water sampling will be conducted by TNPRC personnel. The EPA Team will conduct air sampling. The sampling will be conducted under direction of the EPA TM and TNPRC representatives. Media specific data quality objectives (DQOs) are not applicable. If DQOs are determined to be applicable, they will be developed using the seven-step process set out in the *EPA Guidance for Quality Assurance Project Plans: EPA QA/G-5*.



### **3.3 PRELIMINARY FIELD ACTIVITIES**

Mobilization and preliminary field activities for the ER are discussed in the following subsections.

#### **3.3.1 Field Activities Review Meeting**

The EPA Team FTL will conduct a meeting with the entire field team to familiarize them with the ER Scope of Work; to discuss EPA TM expectations, including planned field investigation activities; and to review the project Health and Safety Plan (HASP) and other relevant EPA team operating procedures. This meeting will be conducted in the WESTON Houston, Texas, office or via video conferencing for team members in other offices prior to mobilizing to the field.

#### **3.3.2 Mobilization and Command Post Establishment**

The EPA Team will mobilize the equipment required for the response from the EPA warehouse in Addison, Texas, and the WESTON equipment stores in Dallas and Houston, Texas. The field team will utilize the EPA mobile Logistics Response Vehicle (LRV) as a command post. Equipment used during the ER will be stored in the command post. Dedicated (nondisposable and disposable) sampling equipment will be used to collect samples in a manner minimizing the number of times that decontamination is performed on a daily basis.

Prior to demobilization, field supplies and equipment will be transported back to the EPA warehouse and WESTON equipment stores.

#### **3.3.3 Health and Safety Plan Implementation**

The ER field activities will be conducted in accordance with the site-specific HASP prepared for this investigation. In general, the HASP specifies that work on the North Campus will proceed in Level D personal protective equipment (PPE). During sampling events on the South Campus the EPA will be teamed with TNPRC personnel and follow TNPRC protocols wearing a modified Level C consisting of Tyvek coveralls, nitrile gloves, boot covers, surgical caps, face shields, and N95 masks. The EPA Team FTL will serve as the Field Safety Officer (FSO) and

will be responsible for implementation of the HASP during field investigation activities. Daily tailgate safety meetings will be held prior to initiation of each work day.

In accordance with the EPA Team's general health and safety operating procedures, the field team will also drive the route to the hospital specified in the HASP prior to initiating sampling activities.

### **3.3.3 Documentation of Field Sampling Activities**

The EPA Team will document the ER field activities in bound field logbooks. At a minimum, the information documented in the field logbook for each sample location will include the following:

- The sample location number and the depths of sample collection.
- A description of the sample location at the site.
- The sample matrix and sample description.
- The analyses for which the samples were collected.
- The date and time of sample collection.

Locations where samples are collected will be documented using a global positioning system (GPS) to obtain horizontal control.

### **3.3.4 Decontamination and Investigation-Derived Wastes (IDW)**

The nondisposable sampling equipment (portable sampling unit) used during the sample collection process will be thoroughly decontaminated before initial use, between locations, and at the end of the response before leaving the Site. Decontamination activities will be conducted at a designated decontamination area. Equipment decontamination will be completed in the following steps:

- High-pressure water spray or brush, if needed, to remove soil from the equipment.
- Nonphosphate detergent and potable water wash to clean the equipment.
- Final potable water rinse.
- Equipment air dried.

The fluids and excess soil/sediment generated as a result of equipment decontamination will be containerized and disposed of by TNPRC personnel according to facility protocols.

### **3.4 SAMPLING/MONITORING APPROACH**

Air sampling will be conducted by the EPA Team. Soil/sediment sampling and water sampling will be conducted by the TNPRC with supervision by the EPA Team. The specific sampling, decontamination, sample handling procedures, and disposition of IDW are described in the following subsections.

#### **3.4.1 Soil Sampling**

Soil/sediment samples will be collected by employees of the TNPRC with supervision and documentation by the EPA Team. Sampling SOPs for naturally occurring Bp in the soils of Southeast Asia call for a sample depth of 30 centimeters. However, for this response the source of the Bp is believed to be runoff of waste products from the macaque cages which could have been deposited onto the top of the soil or sediment. Therefore, soil and sediment samples will be collected in the top 2 inches of soil. Soil sampling procedures include:

- Wear modified Level C PPE protective gear including Tyvek coveralls, nitrile gloves, boot covers, surgical caps, face shields, and N95 respirators, according to TNPRC safety protocols.
- Dig a hole using a clean, disposable shovel to collect a soil sample in the top 2 inches of soil.
- Transfer approximately 30 to 40 grams of soil to sterile containers.
- Upon collection of the sample, the outside of the jar will be cleaned with disinfecting wipes, placed in a resealable plastic bag, and placed into a cooler or other container out of direct sunlight.
- Deliver samples to the laboratory at ambient temperature without exposure to direct sunlight and process as quickly as possible.

Soil sample locations and the sampling order will be determined by the EPA Team while on-site. Sample locations will initially include areas associated with the storm-water treatment system and the sewage treatment system. As the project progresses, samples will be collected from

other locations on the South Campus working from outer areas and moving inward to the cages that contained the affected macaques. Samplers will coordinate with the laboratory to determine how many samples can be shipped each day. Generally, samples will be collected from areas as follows:

- All four sides of macaque cage G12.
- South and east side of macaque cage R24.
- Next to any potential waste streams from impacted field cages.
- Background (near front entrance gate).
- Wetlands sludge.
- Near the outfall 003 and 004.
- Outfall sludge.

Table 3-1 presents a summary of the samples and the sample rational associated with each. Information regarding sample analysis is presented in Section 4.

### **3.4.2 Water Sampling**

Water samples will be collected on-site from within drainage ditches, the sewage treatment system, and the storm-water treatment system. Water samples will be collected by employees of the TNPRC with supervision and documentation by the EPA Team. Sampling procedures include the following:

- Wear modified Level C PPE protective gear including Tyvek coveralls, nitrile gloves, boot covers, surgical caps, face shields, and N95 respirators, according to TNPRC safety protocols.
- Transfer approximately 1 liter of water into sterile containers (two 1-liter containers per sample). Surface water can be “dipped” directly from the water and transferred into the sample jars using a funnel.
- Upon collection of the sample, the outside of the jar will be cleaned with disinfecting wipes, placed into a resealable plastic bag, and placed into a container or cooler out of direct sunlight.
- Deliver samples to the laboratory at ambient temperature without exposure to direct sunlight and process as quickly as possible.

Table 3-1 presents a summary of the samples and the sample rational associated with each. Information regarding sample analysis is presented in Section 4.

### **3.4.3 Air Sampling**

Air samples will be collected by the EPA Team using Portable Sampling Units (PSUs). Three PSUs will be deployed throughout the site. PSUs will initially be deployed on the South Campus at the fence line closest to Northlake Christian School, near the aerator on the sewage treatment system, and at the gravel filter near water outlet 3. The locations of the samplers may change due to changes in weather or changes in work activities. Samples will be collected for 24-hour periods.

1. PSU-247: Fenceline near Northlake Christian School (east side of South Campus).
2. PSU-465: Near sewage aeration pond (west side of South Campus).
3. PSU-340: Near gravel filter (center of South Campus).

The flow rate will be set to 100 liters per minute (L/min) at the beginning of the run. The flow rate will be noted at the completion of the run. The flow rate for the run will be the average of the flow rates at the beginning and end of the run. The reading on the time counter will be noted at the beginning of the sample run and at the end of the run. The difference on the time counter from the end of the run and the beginning of the run will be the sample run time. The sample counter is more accurate than elapsed time in that it will correct for any down time due to power outages.

The sampling head from the PSUs will be collected, bagged, and sent to the laboratory for analysis.

At the completion of the project, the PSU will be decontaminated with antiseptic wipes. After decontamination, the EPA Team will collect swab samples at the PSU inlet hood and on the lid of the PSU. The swab samples will be sent to the laboratory for QA/QC analysis.

Table 3-1 presents a summary of the samples and the sample rational associated with each. Information regarding sample analysis is presented in Section 4.

### **3.4.4 Wipe Sampling**

The EPA Team will collect wipe samples from flat surfaces using sterile swabs made of synthetic fibers. Wipe samples will be collected from the vans that were used to transport macaques from the South Campus to the North Campus and from the PSUs at the completion of the project.

### **3.4.5 Investigation-Derived Wastes**

Any used PPE, excess fluids generated as a result of equipment decontamination, and non-dedicated sampling equipment will be stored on-site and be disposed by the TNPRC.

### **3.4.6 Quality Assurance/Quality Control Samples**

The EPA Team will observe collection of field duplicates of soil samples, water and air samples and document preparation of QA/QC samples as needed during the response sampling activities. QA/QC samples may include but not be limited to the following:

- Blind field duplicate soil samples and sediment samples may be collected to assist in the QA of the sampling procedures and laboratory analytical data by allowing an evaluation of reproducibility of results. Efforts will be made to collect duplicate samples in locations where there is visual evidence of contamination or where contamination is suspected. Blind field duplicate samples will be collected at the rate of one duplicate for every 10 samples collected.
- Equipment rinsate blanks may be prepared by pouring laboratory-grade de-ionized water over non-disposable sampling equipment after it has been decontaminated and by collecting the rinse water in sample containers for analyses.
- Field blanks may be prepared by pouring laboratory-grade de-ionized water into pre-cleaned laboratory-grade sample containers for analysis. These samples will be prepared to demonstrate the impact the surrounding environment is having on the samples being collected. Field blank samples will be collected for this particular scope of work at a rate of one per day.
- Wipe (swab) samples will be collected during decontamination activities of the PSU units. These samples will be prepared to demonstrate that the equipment decontamination

procedures for the sampling equipment were performed effectively. The wipe samples will be collected at the end of each air sample collection period.

Specific laboratory information is included in Section 4 of this QASP.

### **3.5 DEVIATIONS FROM THE SAMPLING PLAN**

Deviations from the sample locations may occur at the EPA TM direction due to new observations made prior to sampling, information obtained in the field that warrants an altered sampling point, difficulty in sample collection, or limited access. The EPA TM will be notified, and concurrence will be obtained should significant deviations from the planned sampling points be proposed. Details regarding deviations of the QASP will be documented in the site logbook and reported in the final ER report to EPA.

**Table 3-1**  
**Sample Locations and Sampling Rationale**  
**Tulane University – National Primate Research Center**  
**Covington, Louisiana**

<b>Sample Name</b>	<b>Sample Matrix</b>	<b>Sample Location (refer to Figure 3-1)</b>	<b>Rationale</b>
SW01-G-150209-N-01	Surface Water	Pond 9	Part of the storm water treatment system.
SW02-G-150209-N-01	Surface Water	Pond 8	Storm water collects here.
SW03-G-150209-N-01	Surface Water	Outfall 004	Confluence of site storm water.
SW03-G-150209-D-01	Surface Water	Outfall 004 - Duplicate	Duplicate -- collected for QA/QC
SW04-G-150209-N-01	Surface Water	Outfall 003	Outlet of water treatment system. All sewage and storm water exits here.
SW05-G-150209-N-01	Surface Water	Field Blank	Tap Water -- collected for QA/QC
SW06-G-150209-N-01	Surface Water	Contact Basin	Part of water treatment system. Sewage and storm water flow through here.
SW07-G-150209-N-01	Surface Water	Rock Filter	Part of water treatment system. Sewage and storm water flow through here.
SW08-G-150209-N-01	Surface Water	Wetlands – South	Part of water treatment system. Sewage and storm water flow through here.
SW09-G-150209-N-01	Surface Water	Wetlands – West	Part of water treatment system. Sewage and storm water flow through here.
SW10-G-150209-N-01	Surface Water	Wetlands – North	Part of water treatment system. Sewage and storm water flow through here.
SW11-G-150209-N-01	Surface Water	Ditch near Macaque Cage - G12	G12 was a cage that held an affected macaque. Determine if waste products spread Bp into the ditch near the cage.
SW12-G-150209-N-01	Surface Water	Ditch near Macaque Cage - R24	R24 was a cage that held an affected macaque. Determine if waste products spread Bp into the ditch near the cage.
SW13-G-150209-N-01	Surface Water	Aeration Pond	Part of water treatment system. Sewage passes through here.
WW14-G-150212-N-01	Waste Water	Lift Station	Part of water treatment system. Sewage from North Campus passes here.
PSU01-C-YYMMDD-N-01	Air	Fenceline near Northlake Christian School (East side of South Campus)	Collected to document air monitoring – one sample per day



Sample Name	Sample Matrix	Sample Location (refer to Figure 3-1)	Rationale
PSU02-C-YYMMDD-N-01	Air	Near sewage aeration pond (West side of South Campus)	Collected to document air monitoring – one sample per day
PSU03-C-YYMMDD-N-01	Air	Near gravel filter (Middle of South Campus)	Collected to document air monitoring – one sample per day
PSU04-C-150212-N-01	Air	Near maintenance building (North Campus)	Collected to document air monitoring – one sample only
SWAB01-G-150212-N-01	Swab	Steering wheel of van 1 TPC09 Lic# V340918	Vehicle used to transfer macaques
SWAB02-G-150212-N-01	Swab	Front of bed of van 1 TPC09 Lic# V340918	Vehicle used to transfer macaques
SWAB03-G-150212-N-01	Swab	Middle of bed of van 1 TPC09 Lic# V340918	Vehicle used to transfer macaques
SWAB04-G-150212-N-01	Swab	Back of bed of van 1 TPC09 Lic# V340918	Vehicle used to transfer macaques
SWAB05-G-150212-N-01	Swab	Steering wheel of van 2 TPC22 Lic# KIB568	Vehicle used to transfer macaques
SWAB06-G-150212-N-01	Swab	Bed of van 2 TPC22 Lic# KIB568	Vehicle used to transfer macaques
SWAB07-G-150212-N-01	Swab	Head of PSU247	PSU was used inside of South Campus
SWAB08-G-150212-N-01	Swab	Lid of PSU247	PSU was used inside of South Campus
SWAB09-G-150212-N-01	Swab	Head of PSU340	PSU was used inside of South Campus
SWAB10-G-150212-N-01	Swab	Lid of PSU340	PSU was used inside of South Campus
SWAB11-G-150212-N-01	Swab	Head of PSU465	PSU was used inside of South Campus
SWAB12-G-150212-N-01	Swab	Lid of PSU465	PSU was used inside of South Campus

**Table 3-1**  
**Sample Locations and Sampling Rationale**  
**Tulane University – National Primate Research Center**  
**Covington, Louisiana**  
**(Continued)**

Sample Name	Sample Matrix	Sample Location (refer to Figure 3-1)	Rationale
SS01-G- 150210-N-01 through SS10-G- 150210-N-01	Soil/Sediment	Near cage G12	G12 was a cage that held an affected macaque. Samples will determine if waste products spread Bp into the soil near the cage.
SS11-G- 150210-N-01 through SS16-G- 150210-N-01	Soil/Sediment	Near cage R24	R24 was a cage that held an affected macaque. Samples will determine if waste products spread Bp into the soil near the cage.
SS17-G- 150210-N-01	Soil/Sediment	Outfall 003	Outlet of water treatment system. All sewage and storm water exits here.
SS18-G- 150210-N-01	Soil/Sediment	Outfall 004	Collection of all storm water on the site.
SS19-G- 150210-N-01 through SS22-G- 150210-N-01	Soil/Sediment	Ditches near G12	Col G12 was a cage that held an affected macaque. Samples will determine if waste products spread Bp into the soil near the cage.
SS23-G- 150210-N-01 through SS28-G- 150210-N-01	Soil/Sediment	Ditches near R24	R24 was a cage that held an affected macaque. Samples will determine if waste products spread Bp into the soil near the cage.
SS29-G- 150210-N-01	Soil/Sediment	Outfall 004 Ditch	Collection of all storm water on the site.
SS30-G- 150210-N-01 through SS32-G- 150210-N-01	Soil/Sediment	Wetland area, North, Middle, and South	Part of the water treatment system. All sewage and storm water passes through here.
SS33-G- 150210-N-01 through SS35-G-150210-N-01	Soil/Sediment	Duplicates, TBD	Duplicate -- collected for QA/QC
SS36-C- 150211-N-01	Soil/Sediment	Surface composite from inside of cage G12 – 4 points under perches	Cage held an affected macaque
SS37-C- 150211-N-01	Soil/Sediment	Grab depth sample inside of cage G12 – under a perch	Cage held an affected macaque
SS38-G- 150211-N-01	Soil/Sediment	Surface composite from inside of cage G12 – 4 points not under perches	Cage held an affected macaque
SS39-C- 150211-N-01	Soil/Sediment	Grab depth sample inside of cage G12 – not under a perch	Cage held an affected macaque

SS40-G- 150211-N-01	Soil/Sediment	Surface composite from inside of cage R24	Cage held an affected macaque
SS41-G- 150212-N-01	Soil/Sediment	Surface grab from van parking area	Vans used to transport macaques
SS42-G- 150212-N-01	Soil/Sediment	Surface grab from van parking area	Vans used to transport macaques

## **4. ANALYTICAL APPROACH**

Samples collected as part of the response will be prepared for shipment and shipped by TNPRC personnel who have training and certification in the proper shipment of biological samples. The EPA team will prepare chain-of-custody (COC) documentation and will assist TNPRC personnel with the sample packaging. Samples will be sent to the CDC laboratory in Atlanta, Georgia.

**Table 4-1**  
**Requirements for Containers, Preservation Techniques,**  
**Sample Volumes, and Holding Times**  
**Tulane University – National Primate Research Center**  
**Covington, Louisiana**

Name	Analytical Methods	Container	Preservation	Sample Containers	Maximum Holding Time
Bp bacteria in soil	CDC methods	Glass	None. Keep at ambient temperature and out of UV light	One 8 oz jar	N/A
Bp bacteria in water	CDC methods	Glass	None. Keep at ambient temperature and out of UV light	Two 1-liter jars	N/A
Bp bacteria in air	CDC methods	PTFE Filter	None. Keep at ambient temperature and out of UV light	One sample filter assembly	N/A
<u>Bp bacteria on a surface</u>	<u>CDC methods</u>		<u>None. Keep at ambient temperature and out of UV light</u>		<u>N/A</u>

oz = ounce

PTFE = Polytetrafluoroethylene

Note: Information on containers, preservation, and holding times provided by CDC.

## **5. QUALITY ASSURANCE**

Quality assurance will be conducted in accordance with the WESTON Corporate Quality Management Manual, dated March 2014, and the WESTON Programmatic Quality Assurance Project Plan (QAPP). Following receipt of the TDD from EPA, a Quality Control (QC) officer is assigned and monitors work conducted throughout the entire project including reviewing interim report deliverables and field audits. The EPA Team FTL will be responsible for QA/QC of the field investigation activities. The designated laboratory utilized during the investigation will be responsible for QA/QC related to the analytical work. The EPA Team will also collect samples to verify that laboratory QA/QC is consistent with the required standards and to validate the laboratory data received as described above.

All sampling will be conducted following SOPs, which are found in Appendix A.

### **5.1 SAMPLE CUSTODY PROCEDURES**

After sample collection and identification, samples will be maintained under COC procedures. If the sample collected is to be split (laboratory QC), the sample will be allocated into similar sample containers. Sample labels completed with the same information as that on the original sample container will be attached to each of the split samples. Personnel required to package and ship coolers containing potentially hazardous material will be trained accordingly.

The EPA Team will prepare and complete COC forms using SCRIBE for samples sent to an off-site laboratory. The COC procedures are documented and will be made available to personnel involved with the sampling. A typical COC record will be completed each time a sample or group of samples is prepared for shipment to the laboratory. The record will repeat the information on each sample label and will serve as documentation of handling during shipment. A copy of this record will remain with the shipped samples at all times, and another copy will be retained by the member of the sampling team who originally relinquished the samples. At the completion of the project, the DM will export the SCRIBE COC documentation to the Analytical Service Tracking System (ANSETS) database.

Samples relinquished to the participating laboratories will be subject to the following procedures for transfer of custody and shipment:

- Samples will be accompanied by the COC record. When transferring possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time of the sample transfer on the record. This custody records document transfer of sample custody from the sampler to another person or to the laboratory.
- Samples will be properly packed for shipment and dispatched to the appropriate laboratory for analysis with separate, signed custody records enclosed in each sample box or cooler. Sample shipping containers will be custody-sealed for shipment to the laboratory. The preferred procedure includes use of a custody seal wrapped across filament tape that is wrapped around the package at least twice. The custody seal will then be folded over and adhered to seal and ensure that the only access to the package is by cutting the filament tape or breaking the seal to unwrap the tape.
- If sent by common carrier, a bill of lading or airbill will be used. Bill of lading and airbill receipts will be retained in the project file as part of the permanent documentation of sample shipping and transfer.

## **5.2 PROJECT DOCUMENTATION**

Documents will be completed legibly in ink and by entry into field logbooks and SCRIBE as described above. Response Manager will be used based on direction of the EPA TM.

### **5.2.1 Custody Seal**

Custody seals demonstrate that a sample container has not been tampered with or opened. The individual who has custody of the samples will sign and date the seal and affix it to the container in such a manner that it cannot be opened without breaking the seal.

### **5.2.2 Photographic Documentation**

The EPA Team will take photographs to document site conditions and activities as site work progresses. Initial conditions should be well documented by photographing features that define the working conditions. Representative photographs should be taken of each type of site activity. The photographs should show typical operations and operating conditions as well as special

situations and conditions that may arise during site activities. Site final conditions should also be documented as a record of how the site appeared at completion of the work.

Photographs will be taken using digital cameras capable of recording the date, time, and location. Each photograph will be recorded in the logbook with the location of the photographer, direction the photograph was taken, the subject of the photograph, and its significance (i.e., why the picture was taken).

### **5.2.3 Report Preparation**

At the completion of the project, the EPA Team will review and validate laboratory data and prepare a draft report of field activities and analytical results for EPA TM review. Draft deliverable documents will be uploaded to the EPA TeamLink Web-site for EPA TM review and comment.